30

SYSTEM AND METHOD FOR VERIFYING THE VALIDITY OF A PATH IN A NETWORK ENVIRONMENT

ABSTRACT OF THE DISCLOSURE

A method for verifying a validity of a path is provided that includes receiving an advertisement communication at a first autonomous system from a second autonomous system, the advertisement communication including a list of one or more connected autonomous systems. The method also includes identifying whether the first autonomous system claims a connection to the second autonomous system and whether the second autonomous system claims a connection to the first autonomous system such that two-way connectivity is established between the autonomous systems. In response to the establishment of the two-way connectivity, a directed graph is constructed that includes two nodes representing the first and second autonomous systems respectively. An edge may be formed that connects the two nodes.

10

15